

TITLE

A METHOD FOR PREPARING PARA-HYDROXYSTYRENE BY
BIOCATALYTIC DECARBOXYLATION OF PARA-HYDROXYCINNAMIC
5 ACID IN A BIPHASIC REACTION MEDIUM

ABSTRACT OF THE DISCLOSURE

A biocatalytic method for preparing para-hydroxystyrene from para-
hydroxycinnamic acid is described. The method uses an enzyme source
having para-hydroxycinnamic acid decarboxylase activity to catalyze the
10 decarboxylation of para-hydroxycinnamic acid in a biphasic reaction
medium to produce para-hydroxystyrene, which is extracted into the
organic phase of the biphasic reaction medium. The method results in a
high yield of para-hydroxystyrene due to the decreased exposure of the
enzyme source to the inhibitory product. The product is readily recovered
15 from the extractant, or may be chemically derivatized directly in the
extractant before recovery.